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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,934	07/26/2001	Jean-Louis Dornstetter	P-6161	3479
7590	07/02/2004		EXAMINER	
Michael L Kenaga Rudnick & Wolfe PO Box 64807 Chicago, IL 60664-0807				FAN, CHIEH M
			ART UNIT	PAPER NUMBER
			2634	
DATE MAILED: 07/02/2004				

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/763,934	DORNSTETTER ET AL.
	Examiner	Art Unit
	Chieh M Fan	2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 7/26/01 (35 USC 371 date).
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) _____ is/are rejected.
 7) Claim(s) 1-8 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 26 July 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 6.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
2. The applicants filed a preliminary amendment 2/27/01 to insert section headings into the specification. However, the applicants apparently indicated incorrect page/line numbers to insert headings. Only the first heading "background of the invention" has been entered. The applicants need to indicate correct locations to insert the headings "summary of the invention", "brief description of the drawings" and "description of preferred embodiments".

Claim Objections

3. Claims 1-8 are objected to because of the following informalities:

Regarding claim 1, it is suggested changing the limitation "the unit circle" in line 15 to --- a unit circle of the complex plane ---.

Regarding claim 2, the applicants are invited to check if the limitation "representing a frame size" in line 6 should be changed to --- representing a number of the discrete information symbols ---.

Regarding claim 5, it is suggested changing the limitation "the unit circle" in line 16 to --- a unit circle of the complex plane ---, and changing "the discrete symbols" in line 27 to --- discrete symbols ---.

Regarding claim 6, the applicants are invited to check if the limitation "representing a frame size" in line 7 should be changed to --- representing a number of the discrete symbols ---.

Appropriate correction is required.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zangi et al. (U.S. Patent No. 6,608,862), Mitra et al. (U.S. Patent No. 5,533,063), Serfaty (U.S. Patent No. 5,293,401).

5. This application is in condition for allowance except for the following formal matters:

The applicants need to overcome the objections in the specification and claims.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (703) 305-0198. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM, Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703) 305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


Chieh M Fan
Primary Examiner
Art Unit 2634

cmf
June 25, 2004